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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,710	05/24/2004	Nien-Hui Hsu	OTMP0079USA	3709

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EXAMINER
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BLACKMAN, ROCHELLE ANN J

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 05/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/709,710	<b>Applicant(s)</b> HSU ET AL.	
	<b>Examiner</b> Rochelle Blackman	<b>Art Unit</b> 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 May 2006.  
 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 and 7-15 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☒ Claim(s) 3,5 and 10 is/are allowed.  
 6) ☒ Claim(s) 1,2,4,7-9 and 11-15 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☒ The drawing(s) filed on 24 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:  
         1. ☒ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 16, 2006 has been entered.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-5 and 7-15 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

Claim 1 is objected to because of the following informalities: on lines 9 and 10 of the claim, the 2<sup>nd</sup> "air duct" should be omitted. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2851

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 2, 4, 7-9, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Furuhashi et al. (U.S. Patent No. 5,951,136).

Regarding claim 1, Furuhashi discloses an intake structure (see 16, 150B, and 170 of FIG. 3), installed in a projection apparatus (see 1 of FIGS. 1A-B and 2A-B) which has at least one heating element (for example, see 7, 70 of FIG. 3), comprising: at least one intake port (see 150B of FIG. 3) disposed on said projection apparatus; at least one air duct (see 170 of FIG. 3), an inlet (see area of 170 immediately adjacent to "intake port" 150B in FIG. 3) of said air duct being directly connected to said intake port (see col. 11, lines 18-23) and an outlet (see area of 170 immediately adjacent to element 17 in FIG. 3) of said air duct being disposed near said heating element; and an exhaust fan (see 16 of FIG. 3) disposed near said heating element for exhausting air passing by said heating element, an intake side of said exhaust fan facing said heating element (see "intake side" of "exhaust fan" 16 relative location of "heating element" 7, 70 in FIG. 3), said heating element disposed between said outlet of said air duct and said exhaust fan (see location of "heating element" 7, 70 relative to the locations of the above-described "outlet" of "air duct" 170 and "exhaust fan" 16 in FIG. 3).

Regarding claim 2, Furuhashi discloses wherein said air duct has a bent air path (see shape of 170 in FIG. 3).

Regarding claim 4, Furuhashi discloses wherein said air duct has a straight air path (see shape of 170 in FIG. 3).

Regarding claim 7, Furuata discloses wherein said exhaust fan is disposed near said heating element and said air duct for guiding outside air stream flowing through said heating element (see location of "exhaust fan" 16 relative to the locations of "heating element" 7,70 and "air duct" 170 and "exhaust fan" 16 in FIG. 3).

Regarding claim 8, Furuata discloses wherein the area of said inlet of said air duct to be set depends on the area of said intake port (see area of the inlet of "air duct" 170 relative to area of "intake port" 150B in FIG. 3).

Regarding claim 9, Furuata disclose wherein the quantity of said air duct to be set depends on the quantity of said heating element (see quantity of "air duct" 170 relative to quantity of "heating element" 7, 70 in FIG. 3).

Regarding claim 14, Furuata discloses wherein said heating element is an electronic component (see 7, 70 of FIG. 3 and col. 6, lines 9-15).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 4, 7-9, 12, and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamada et al. (U.S. Patent Application Publication No. 2003/0189694).

Regarding claim 1, Yamada discloses an intake structure (see 132L, 92-94, 47, and 524-526 of FIGS. 12-14), installed in a projection apparatus (see 1 of FIGS. 1-7, and 12) which has at least one heating element (for example, see 41-44 of FIG. 11), comprising: at least one intake port (see 132L of FIG. 13) disposed on said projection apparatus; at least one air duct (see 92-94 of FIG. 13), an inlet (see area of 92 adjacent 132L in FIG. 13) of said air duct being directly connected to said intake port (see 92 in relation to 132L in FIG. 13) and an outlet (see area of 94 adjacent element 523 in FIGS. 13 and 14) of said air duct being disposed near said heating element (for example, see 44 in FIG. 14, "heating elements" 41-43 are adjacent "heating element" 44 and are also considered to be "near" the "outlet" of the "air duct"); and an exhaust fan (see 524-526 and 521 of FIGS. 12-14 and see paragraphs [0150]-[0152]) disposed near said heating element for exhausting air passing by said heating element, an intake side of said exhaust fan facing said heating element (for example, see "intake side" of "exhaust fan" 524 relative to "heating element" 44 in FIG. 14, also see paragraphs [0150]-[0152] – the air also passes by the "heating elements" 41-43 and is then drawn into "exhaust fans" 525 and 526), said heating element disposed between said outlet of said air duct and said exhaust fan (for example, see location of "heating element" 44 relative to the "outlet" of "air duct" 94 and "exhaust fan" 524 in FIG. 14, according to the location of "exhaust fans" 525 and 526 in FIG. 12, "heating elements" 41-43 are also considered to be located between the "outlet" of "air duct" 94 and "exhaust fans" 525 and 526).

Regarding claim 2, Yamada discloses wherein said air duct has a bent air path (see shape of 92-94 in FIG. 13).

Regarding claim 4, Yamada discloses wherein said air duct has a straight air path (see shape of 92-94 in FIG. 13).

Regarding claim 7, Yamada discloses wherein said exhaust fan is disposed near said heating element and said air duct for guiding outside air stream flowing through said heating element (for example, see "exhaust fan" 524 relative "heating element" 44 and "air duct" 92-94).

Regarding claim 8, Yamada discloses wherein the area of said inlet of said air duct to be set depends on the area of said intake port (see area of the inlet of "air duct" 92-94 relative to area of "intake port" 132L in FIG. 13).

Regarding claim 9, Yamada discloses wherein the quantity of said air duct to be set depends on the quantity of said heating element (see quantity of "air duct" 92-94 relative to quantity of "heating element" 44 in FIG. 3 – elements 92-94 are connected and therefore considered to form one single duct).

Regarding claim 12, Yamada discloses wherein said heating element is relay lens (see 431 and 433 of "heating element" 43 in FIG. 11).

Regarding claim 13, Yamada discloses wherein said heating element is a condenser (see 415 of "heating element" 41 in FIG. 11).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. (U.S. Patent Application Publication No. 2003/0189694) in view of Bok (U.S. Patent Application Publication No. 2002/0180938).

Yamada discloses the claimed invention including "heating elements" 41 and 42 which contain first and second lens arrays 412 and 413 acting as an integrator and dichroic mirrors 421 and 422 used to split light into different colors. However, Yamada does not appear to disclose heating elements that are an "integration rod" and a "color wheel".

Bok teaches providing heating elements that are an integration rod (330, 430, 530 of FIGS. 3-5) used to integrate light and a color wheel (see 320, 420, 520 of FIGS. 3-5) used to split light into different colors. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the "projection apparatus" of the Yamada reference with a integration rod, since an integration rod and lens arrays are equivalent structures used in the art and the selection of any of these known equivalents to integrate light would be within the level of ordinary skill in the art; and a color wheel, since a color wheel and dichroic mirrors are equivalent structures



used in the art and the selection of any of these known equivalents to split light into different colors would be within the level of ordinary skill in the art.

***Allowable Subject Matter***

1. Claims 3, 5, and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
2. The following is a statement of reasons for the indication of allowable subject matter:

Claims 3 and 5 have been found to be allowable because the prior art of record either alone or in combination neither discloses nor makes obvious the intake structure comprising the particular feature of the outlet of the air duct being connected to a splitting duct, in combination with the particular combination of features recited in claims 1 and 2 or claims 1 and 4.

Claim 10 has been found to be allowable because the prior art of record either alone or in combination neither discloses nor makes obvious the intake structure comprising the particular feature of the distance between the heating element and the outlet of the air duct being 1 to 10 mm, in combination with the particular combination of features recited in claim 1.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rochelle Blackman whose telephone number is (571) 272-2113. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Rochelle Blackman  
Patent Examiner